

**SUMTER COUNTY BOARD OF COMMISSIONERS  
EXECUTIVE SUMMARY**

**SUBJECT:** CR 647N Improvements Design and Permitting (staff recommends approval)

**REQUESTED ACTION:** Board approval

Work Session (Report Only)

**DATE OF MEETING:** 5/10/2011

Regular Meeting

Special Meeting

**CONTRACT:**  N/A

Vendor/Entity: AECOM

Effective Date: 5/10/2011

Termination Date: July 29, 2011

Managing Division / Dept:

Public Works Division/Road and Bridge

**BUDGET IMPACT:** \$27,718

Annual

**FUNDING SOURCE:**

103 CTT

Capital

**EXPENDITURE ACCOUNT:**

103-340-541-6564

N/A

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**HISTORY/FACTS/ISSUES:**

In January 2011 the Board reversed the decision to vacate the property that encompasses CR 647N, and the PWD was directed to make improvements to the road so that concerns about rutting and trucks moving in and out would be immaterial. This improvement was made by Road and Bridge in February (see attached photo). This improvement has held up well, even thru the heavy rains of late March and early April (see attached photo).

However, the PWD recommends additional improvements to both CR 647N, and the adjacent road CR 657W. There are pre-existing drainage issues in this area which should be corrected by a follow-on effort that would involve minor ditches and inlets, and paving of CR647N and ditch maintenance/re-establishment, culvert setting, cross drains and a drainage easement at the bottom of the CR 657W.

On March 29, 2011 the PWD sent a letter to each of the residents on CR 647N (Mareks, Houghs, and Clays) requesting their input to the follow-on improvements. A copy of one letter is attached for reference. The PWD received verbal feedback from all three families recommending the following:

1. Require the owners at the west end of CR647N to drive on the graveled roadway section instead of cutting the corner which is near the Marek's septic tank.
2. Do what is the best, engineering wise.
3. Consider the need for a swale/ditch on the north side of the graveled roadway section.

AECOM's proposal is attached for BOCC consideration. If approved, the design and permitting will take up to 10 weeks; once the design and permitting are complete most of the construction effort will be performed in-house by Road and Bridge. We have allocated \$32k for material and easement costs, but that could change once the design process is completed. Our intent is to keep the roadway near the center of the County ROW.

Attached: two photos, typical letter to residents, and AECOM proposal.

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02.18.2011 13:11

February 2011



April 2011

# SUMTER COUNTY PUBLIC WORKS

SUMTER COUNTY, FLORIDA

319 E. Anderson Avenue • Bushnell, FL 33513 • Phone (352) 569-6700 • Fax (352) 569-6701 • Website <http://sumtercountyfl.gov>



March 29, 2011

Mr. and Mrs. John Marek  
9491 CR 647 N  
Bushnell, FL 33513

Dear Mr. and Mrs. Marek:

As mentioned in my letter to you of March 3, 2011, it is our intent to improve and maintain this short section of CR 647N so as to ensure safe and adequate access to all three property owners. To that end, we have engaged one of the County's engineering consulting firms to assess the work to date and make recommendations as to widening and improving the road base on CR 647N and related drainage improvements on the right of way (ROW), and also along CR 657, if appropriate.

The consultant's proposal is attached for your review. We welcome your thoughts and comments as we decide the most appropriate course of action for this location. Once we have decided on that course of action and the Board of County Commissioners approves it, the consultant will then take 4 -10 weeks to complete the design and permitting as required.

The next step will be to allocate the maintenance and/or construction funds to implement the chosen course of action. Depending on which course of action is approved, this might be in the next fiscal year, which starts October 1, 2011.

Public Works continues to endeavor to minimize impacts to all concerned, but our primary objective is to provide adequate access to all three property owners, without creating drainage issues for others in the neighborhood.

Should you have questions please contact me at either (352) 569-6700 or by email at [scott.cottrell@sumtercountyfl.gov](mailto:scott.cottrell@sumtercountyfl.gov).

Sincerely,

15/

Scott B. Cottrell, PE  
Director, Public Works Division



AECOM  
150 N. Orange Avenue  
Suite 200  
Orlando, FL 32801  
www.aecom.com

407-843-6552 tel  
407-839-1789 fax

May 4, 2011

Mr. Scott B. Cottrell, PE  
Public Works Director  
Sumter County  
319 E. Anderson Ave.  
Bushnell, FL 33513

RE: Revised Proposal to Provide Engineering Services  
Paving and Drainage Improvements  
CR 647N/CR 657W

Dear Mr. Cottrell:

This letter constitutes AECOM's proposal to provide requested engineering services for paving and drainage improvements to two existing road sections in Sumter County. These services are offered under the terms of the agreement for Continuing Engineering Services Contract between the Board of County Commissioners of Sumter County (Board) and AECOM Technical Services, Inc., (Engineer) dated March 25, 2008. It is expected that, for this project, the Engineer will interface with the Sumter County Public Works Department (PWD).

#### **Project Understanding**

The project is located in southwestern Sumter County, generally in the vicinity of the intersection of CR 647N and CR 657W. From this intersection, an unpaved section of CR 647N extends west approximately 150 feet to its terminus. Also from this intersection, CR 657W extends south approximately 700 feet to an intersection with CR 657. These two road sections are the subject of this proposal. See attached **Figure 1**.

The CR 647N stub road section serves three properties: One property north of the road, one property south of the road, and one property west of the road terminus. The Board has installed and maintains an approximately 12-foot wide crushed shell road base within the right-of-way of the 150-foot long unpaved stub road section of CR 647N. Existing grade slopes generally from the north to the south across the right-of-way of this stub road section.

The issues to be resolved for this stub road section of CR 647N are:

1. Provide paving improvements for this stub road section.
2. Provide drainage system maintenance and improvements to manage stormwater discharged from this stub road section and adjoining properties so as to prevent discharge of stormwater onto private property

CR 657W is approximately 700 feet long, and is an existing two-lane asphalt road. The road surface is serviceable, but is in need of maintenance. Existing grade falls from approximately elevation 100 at the northern end (intersection with CR 647N) to approximately elevation 55 at the southern end (intersection with CR 657). The southern terminus of this road section lies approximately 200 feet (one residential lot) north of a tributary of the Withlacoochee River.

Some existing driveway culverts appear to be non-functional or have reduced hydraulic capacity. Remnants of previously constructed drainage swales and driveway culverts are visible along both sides of

CR 657W. Reports of drainage deficiencies have been made, including discharge of stormwater from the road onto a private lot located on the southeast intersection of CR 657W and CR 647N, and discharge of stormwater from the road onto a private lot located across CR 657 from the southern terminus of CR 657W. From the southern terminus of CR 657W, stormwater appears to discharge across private property to a tributary of the Withlacoochee River.

Note that constructing the improvements required to properly manage stormwater on CR 657W and CR 647N may increase the quantity and/or discharge rate of water to be managed at the south end of CR 657W. Controlled discharge to the Withlacoochee River will be required to prevent flooding and damage to private property. Treatment of the stormwater prior to river discharge will be required.

The issues to be addressed for CR 657W are:

1. Provide drainage improvements required to manage stormwater discharged from CR 647N and CR 657W and the adjoining properties so as to prevent discharge of stormwater onto private property.
2. Provide a system to treat the stormwater prior to discharge to the Withlacoochee River.
3. Obtain property or a utility easement for a stormwater outfall to the Withlacoochee River.
4. Permit and construct the stormwater outfall to the Withlacoochee River.

As requested, this proposal to address the issues to be resolved for each road section. Costs are provided in the attached Project Budget.

### **Scope of Work**

#### Maintenance Design with Outfall and Water Quality Treatment

This scope of work is based on providing the minimum improvements required to address paving needs for the CR 647N stub section and to resolve existing drainage issues along CR 647N and CR 657W. It is expected that PWD will perform the drainage system maintenance work, and if necessary, will obtain paving services through their existing unit price paving contracts. Engineering plans will be prepared for permitting and construction of the improvements. Bid documents will not be prepared because PWD will construct the improvements using in-house staff and equipment, except for asphalt paving. A SWFWMD permit application will be prepared for submittal by the Board.

Readily available data will be used to support the drainage calculations including current USGS topographic data, Sumter County GIS data, SWFWMD GIS data.

Engineering services to be provided:

- A. Evaluation and design of the approximately 150 foot long unpaved stub section of CR647N from the CR657W intersection west to the road terminus, as asphalt paved road. Pavement design will be of the inverted crown type, and will include up to four (4) typical cross sections at key locations showing existing/adjacent grade, drainage swale, culvert, asphalt pavement, road base, and sub-base. As discussed, AECOM will design the improvements so as to maintain the existing width of the CR 647N stub road section. While this road width may be adequate to serve the properties currently using the stub road section, it is not a standard width. If this road width does not conform to a County roadway standard, then the PWD Director will provide a letter accepting the project as designed.

- B. Perform basic stormwater runoff calculations for the CR 647N stub road section and CR 657W, including defining the contributing area, impervious area, NRCS curve number, and Time of Concentration
- C. Design drainage improvements (swales and culverts) along both sides of CR 657W, including evaluating the hydraulic capacity of existing culverts, and designing ditch blocks and piping to the treatment system.
- D. Preparation of a right-of-way map, which will be a figure showing the road rights-of-way, adjoining parcel corners, projected lot lines, edges of pavement, and utilities as marked.
- E. Participate in four meetings with the SWFWMD and/or PWD officials at the project site or the Public Works Department office. This includes one on-site meeting with residents of the area, and a pre-application meeting with SWFWMD.
- F. Design of a Nutrient Separating Baffle Box (NSBB) for water quality treatment system providing sequestration and removal of sand, sediment, litter and vegetative debris.
- G. Design of a drainage outfall to the Withlacoochee River tributary including pipe and end treatment, and sediment and erosion control plan. Develop river stage and tailwater elevation based on readily available data from SWFWMD.
- H. Prepare a SWFWMD Environmental Resource Permit (ERP) application, to be submitted by the Board, for the right-of-way (R/W) improvements and the water quality treatment project including engineering calculations, engineering design plans, and readily available soils and geotechnical data (Sumter County, NRCS and SWFWMD). Respond to one request for additional information (RAI) from SWFWMD. The Board will pay the permit application fee.
- I. Recommendation for location of a utility easement for the drainage outfall from the NSBB to the Withlacoochee River.
- J. Survey coordination and management.

Engineering design plans shall include up to a maximum of two plan and profile sheets, one manufacturer's detail sheet, and two engineering detail sheet.

It is expected that surveying services will be required to prepare the drainage design improvements. An allowance of \$5,000 is included in the budget for this survey work, to include topographic and special purpose right of way survey of the CR 647N stub road section, the intersection of CR 647N and CR 657W, CR 647W, and the intersection of CR 657W and CR 657. Surveying of private property for the utility easement shall be limited to that portion of the property necessary to adequately describe the easement. The surveying services do not include locating underground utilities, except as marked or indicated on the surface, a title search, an environmental assessment or any additional services not specified herein. AECOM will coordinate utility locates.

#### **Services to be provided by Sumter County**

- Communication/coordination with residents and property owners.
- Preparation, execution and recording of easement documents, if required.
- Information pertinent to the project.

#### **Schedule**

- The right-of-way map will be delivered within four to six weeks after receiving notice to proceed from the Board, depending upon the surveyor's schedule.

- The engineering plans and the ERP application will be delivered to PWD within eight to ten weeks after reception of notice to proceed from the Board, or within six weeks after receipt of acceptable survey data, whichever occurs first.

**Compensation**

The Board will pay AECOM the following fees for the scope of work described herein, based on a lump sum payment basis for all work other than surveying. Actual surveying expenses incurred by AECOM will be reimbursed by the Board. AECOM will invoice the Board monthly.

Engineering Services	\$22,718
Surveying Allowance	<u>\$ 5,000</u>
Total Fee	\$27,718

**Other Provisions**

The services described herein will be provided in accordance with the current generally accepted standards of the engineer profession. Certain assumptions have been made in preparing this scope of services. To the extent possible, they are stated herein and are reflected in the budget estimates included in this scope of services. Reasonable material changes between work tasks, or level of effort actually required and those budgeted, may serve as a basis for modifying this scope and budget, as mutually agreed to between the Board and the Engineer.

- After the roadway and/or drainage designs prepared and submitted by the Engineer are accepted by DPW, the Engineer will be compensated for revisions requested by residents or other stakeholders.
- The Engineer is entitled to rely upon the accuracy of historical and existing data and information provided by the Board and others without independent review and verification.
- The Engineer is not responsible for the means, methods, sequences, techniques or procedures of the Board and Contractor operations or for safety precautions and programs.
- Any Opinion of the Construction Cost prepared by the Engineer represents its judgment as a design Engineer and is supplied for the general guidance of the Board. Since the Engineer has no control over the cost of labor and material, or over market conditions, the Engineer does not guarantee the accuracy of such opinions as compared to contractor bids or actual costs to the Board.
- Documents, drawings, and specifications, and electronic information/data, including computer aided drafting and design ("CADD"), prepared by the Engineer pursuant to this agreement are not intended or represented to be suitable for reuse by the Board or others on extensions of the Project or on any other project. Any use of completed documents for other projects and any use of incomplete documents without specific written authorization from the Engineer will be at the Board's sole risk and without liability to the Engineer. The Board assumes full responsibility for such changes unless the BOARD has given the Engineer prior notice and has received from the Engineer written consent for such changes. Electronic data delivered to the Board is for the Board's convenience and shall not include the Engineer stamp or signature of an Engineer or architect. The Board agrees that the Engineer shall not be liable for claims, liabilities or losses arising out of, or connected with the decline of accuracy or readability of electronic data due to inappropriate storage conditions or duration.

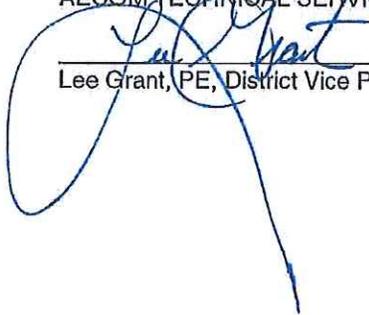
- The Engineer may review a copy of the construction contract documents before they are executed in order that Engineer may confirm that the above requirements have been met. Board agrees to forward to Engineer a complete copy of the fully executed construction contract documents. The documents copied to Engineer will include, but not be limited to, the executed agreement, bonds, insurance certificates and endorsements.

IN WITNESS WHEREOF, the parties have signed this agreement on \_\_\_\_\_, 2011.

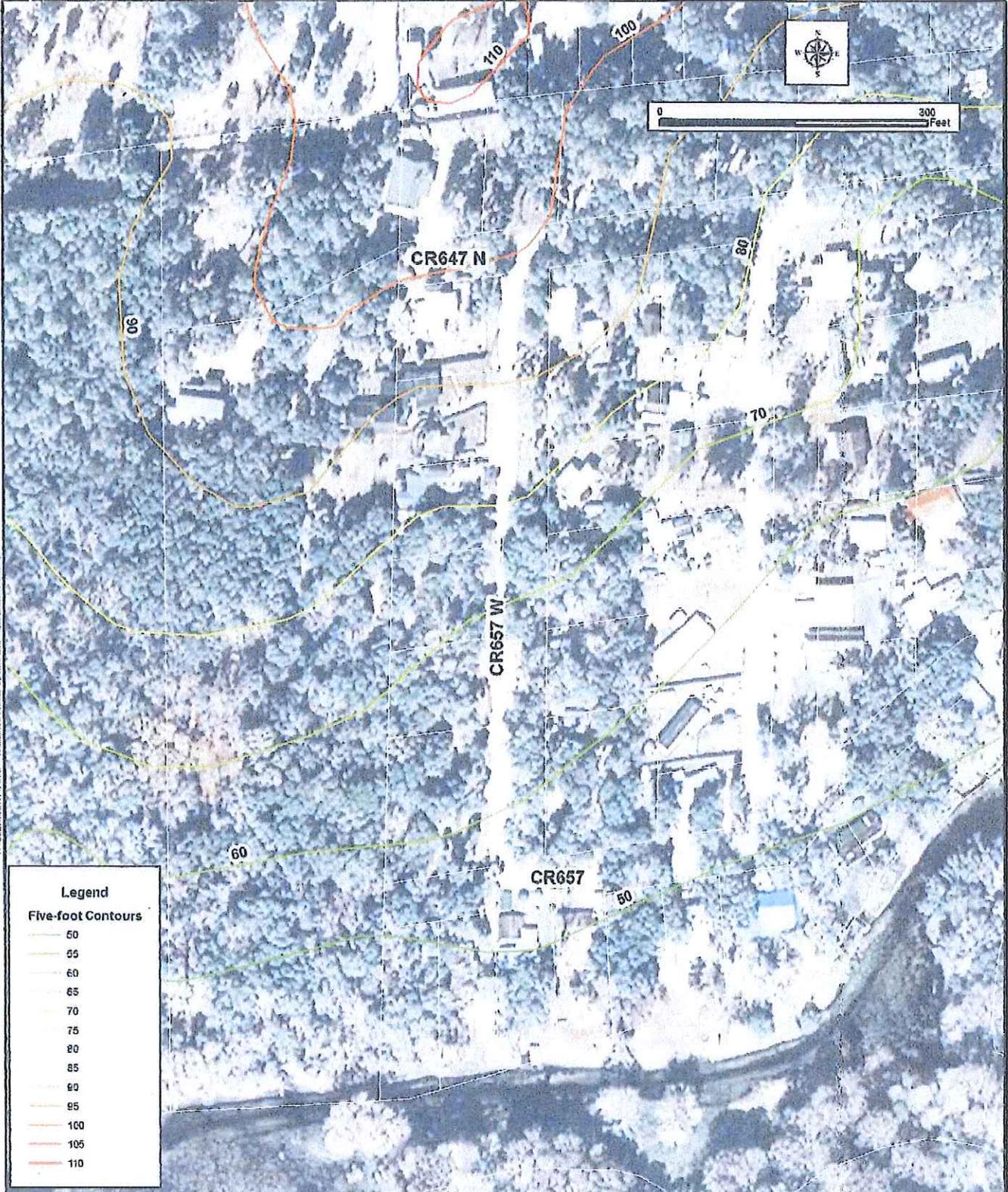
BOARD OF COUNTY COMMISSIONERS  
OF SUMTER COUNTY, FLORIDA

By: \_\_\_\_\_

ENGINEER  
AECOM TECHNICAL SERVICES, INC.

  
\_\_\_\_\_  
Lee Grant, PE, District Vice President

X:\CLERMONT\TOP2 - Reclaimed Model Update and adjustment\GIS\4342D



Legend	
Five-foot Contours	
50	Yellow
55	Light Green
60	Light Yellow
65	Light Green
70	Light Yellow
75	Light Green
80	Light Yellow
85	Light Green
90	Light Yellow
95	Light Green
100	Light Yellow
105	Light Green
110	Light Yellow

Source: Aerial (ESRI 2009);  
 Rights (UDOT), Lakes (DEEP);  
 Year: 2005;  
 Date: March 2011;  
 County: Sumter;  
 Projection: NAD 83 FL EAST (FT)

**Sumter  
 County**

**CR647N/CR657W  
 Paving & Drainage Improvements**

**Site Map**

**AECOM**

150 N Orange Avenue  
 Suite 200  
 Orlando, FL 32801

Figure  
 1

## Project Budget

Sumter County CR647N / CR657W Paving and Drainage Improvements

Sumter County

Task Description	Personnel Hours					Budget		
	Principal	Senior Engineer II	Senior Design Tech	Admin Support I	Total Hours	Labor	Non-Labor Fees	Total
<b><u>Maintenance Design with Outfall and Water Quality Treatment</u></b>								
Project Management	4			6	10	\$ 1,180		\$ 1,180
Evaluation and design of CR 647N stub section roadway improvements		8	6		14	\$ 1,696		\$ 1,696
Stormwater runoff calculations		12			12	\$ 1,644		\$1,644
Design drainage improvements (swales and culverts) to both sides of CR 657W, including evaluating existing culverts, and designing ditch blocks and piping to treatment system	1	16	24		41	\$ 4,800		\$ 4,800
Right-of-way map		4	2	2	8	\$ 864		\$ 864
Three on-site meetings		18		2	20	\$ 2,582	\$ 180	\$ 2,762
Design water quality treatment system design (NSBB)	1	8	6		15	\$ 1,904		\$ 1,904
Design drainage outfall to Withlacoochee River	1	8	8		17	\$ 2,104		\$ 2,104
ERP permitting services		24		2	26	\$ 3,404		\$ 3,404
Utility easement recommendation		2			2	\$ 274		\$ 274
QA/QC	4	2		2	8	\$ 1,222		\$ 1,222
Survey coordination		4	2	2	8	\$ 864		\$ 864
					-	\$ -		\$ -
<b>Subtotal</b>	<b>11</b>	<b>106</b>	<b>48</b>	<b>16</b>	<b>181</b>	<b>\$ 22,538</b>	<b>\$180</b>	<b>\$22,718</b>
<b><u>Survey Allowance</u></b>								
Survey services					-	\$ -	\$ 5,000	\$ 5,000
<b>Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$ -</b>	<b>\$ 5,000</b>	<b>\$ 5,000</b>
<b>Total</b>	<b>11</b>	<b>106</b>	<b>48</b>	<b>16</b>	<b>181</b>	<b>\$ 22,538</b>	<b>\$5,180</b>	<b>\$27,718</b>

Amounts shown are fee.